IN THE CLAIMS

Please cancel claims 1-13 and 15-58 without prejudice, amend claims 1-8 and 59-61, and add new claims 63-88 as follows:

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1. (Once Amended) A hybrid valve ~~apparatus~~ for use with an aspiration actuator and a dispensing actuator to transfer fluid from a reservoir to a test site on a substrate surface comprising:

a valve assembly movable between an aspiration condition and a dispensing condition; and

a manifold device providing a fluid aspiration conduit having a first aspiration port in fluid communication with the aspiration actuator, and a second aspiration port in selective fluid communication with the valve assembly to selectively aspirate a liquid sample slug from the reservoir through a dispensing orifice of a fluid communication structure defining ~~into~~ a discrete sample path extending from the dispensing orifice and through at least a portion of said manifold device for fluid communication with said valve assembly, when the valve assembly is in the aspiration condition, said manifold device further providing a fluid dispensing conduit having a first dispensing port in fluid communication with the dispensing actuator, and a second dispensing port in selective fluid communication with the valve assembly to selectively dispense at least one droplet of the liquid sample slug from said dispensing orifice of said communication structure ~~the sample path~~ when the valve assembly is in the dispensing condition,

wherein, in the aspiration condition, said sample path is out of fluid communication with the dispensing actuator and, in the dispensing condition, said sample path is out of fluid communication with the aspiration actuator.

2. (Once Amended) The hybrid valve apparatus as defined by claim 1, wherein said through at least a portion of said manifold includes a primary passage ~~defining at least a~~ portion of the sample path.

3. (Once Amended) The hybrid valve apparatus as defined by claim 2, wherein ~~further including:~~ not positively claimed

112 said communication structure includes a nozzle member ~~having one end fluidly coupled to said primary passage and an opposite end~~ terminating at ~~a~~ said dispensing orifice configured to aspirate said sample slug and dispense said droplet.

4. (Once Amended) The hybrid valve apparatus as defined by claim 3, wherein said primary passage portion is of a transverse cross-sectional area from about 0.2 mm^2 to about 0.8 mm^2.

5. (Once Amended) The hybrid valve apparatus as defined by claim ~~1~~ 2, wherein said manifold device includes a stator face containing the second aspiration port and the second dispensing port, and said valve assembly includes a valve body having a contact face slideably contacting the stator face at a stator-contact interface for sliding sealed contact between

the aspiration condition, fluidly coupling the second aspiration port to the primary passage portion of the sample path, and

the dispensing condition, fluidly coupling the second dispensing port to the primary passage portion of the sample path.

6. (Once Amended) The hybrid valve apparatus as defined by claim 5, wherein said contact face of the valve body includes

an aspiration channel, fluidly coupling the second aspiration port to the primary passage portion of the sample path through the aspiration channel, in the aspiration condition, and

a dispensing channel, fluidly coupling the second dispensing port to the primary passage portion of the sample path through the dispensing channel, in the dispensing condition.

7. (Once Amended) The hybrid valve apparatus as defined by claim 6, wherein

said primary passage portion ~~manifold device includes a primary passage defining at least a portion~~ of the sample path~~, and having~~ includes an upper communication port terminating at the stator face for fluid communication with the aspiration channel in the aspiration condition, and for fluid communication with the dispensing channel in the dispensing condition.

8. (Once Amended) The hybrid valve apparatus as defined by claim 7, wherein ~~further including:~~

said communication structure includes a nozzle member ~~having one end fluidly coupled to said primary passage and an opposite end~~ terminating at ~~a~~ said dispensing orifice ~~configured~~ to aspirate said sample slug and dispense said droplet.

9. (Original) The hybrid valve apparatus as defined by claim 6, wherein

at least one of said valve body and said manifold device is rotatable about a rotation axis extending substantially perpendicular to the stator-contact interface to rotate said contact face, said aspiration channel and said dispensing channel relative to the stator face between the aspiration condition and the dispensing condition.

10. (Original) The fluid transfer apparatus as defined by claim 9, wherein said dispensing channel and said aspiration channel extend in a direction substantially radially about said rotational axis.

11-13. (Canceled)

14. (Original) The fluid transfer apparatus as defined by claim 1, further including:

a digitally regulated hydraulic pressure system in fluid communication with the dispensing actuator for precision operation thereof.

Claims 15-58 (Canceled)

59. (Once Amended) A method of transferring liquid sample from a fluid reservoir to a test site on a target substrate comprising:

providing a fluid manifold device defining a fluid aspiration conduit having a first aspiration port in fluid communication with an aspiration actuator and a second aspiration port in fluid communication with ~~the~~ a valve assembly, said manifold device further defining a fluid dispensing conduit having a first dispensing port in fluid communication with ~~the~~ a dispensing actuator and a second dispensing port in fluid communication with the valve assembly;

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positioning the valve assembly in an aspiration condition, fluidly coupling the aspiration actuator to a discrete sample path extending from a dispensing orifice and through at least a primary passage portion of said manifold device for fluid communication with said valve assembly, and fluidly decoupling the dispensing actuator from the sample path;

in said aspiration condition, actuating the aspiration actuator to aspirate a liquid sample slug from a sample reservoir into the sample path through said dispensing orifice; ~~and~~

positioning the valve assembly in a dispensing condition, fluidly coupling the dispensing actuator to the sample path, and fluidly decoupling the aspiration actuator from the same path; and

in said dispensing condition, actuating the dispensing actuator to dispense at least one droplet of the liquid sample slug out of said sample path through said dispensing orifice.

60. (Once Amended) The method according to claim 59, wherein

said ~~manifold device includes a~~ primary passage portion of said manifold device having a upper communication port terminating at a stator face of the

manifold, said stator face further containing the second aspiration port and the second dispensing port.

61. (Once Amended) The method according to claim 60, wherein

said positioning the valve assembly to the aspiration condition or the dispensing condition includes slideably engaging a contact face of the valve assembly against the stator face of the manifold device at a stator-contact interface, to fluidly couple the aspiration actuator to the primary passage portion of the sample path or fluidly couple the dispensing actuator to the primary passage portion of the sample path, respectively.

62. (Original) The method according to claim 61, wherein

said slideably engaging includes rotating an aspiration channel and a dispensing channel in the contact face of the valve assembly about a rotation axis thereof, relative the stator face, to

fluidly couple the upper communication port with the second aspiration port, through the aspiration channel, in the aspiration condition, and

fluidly couple the upper communication port with the second dispensing port, through the dispensing channel, in the dispensing condition.

63. (New) The hybrid valve apparatus as defined by claim 3, wherein

said nozzle member having one end mounted to said manifold device and fluidly coupled to said primary passage portion.

64. (New) The hybrid valve apparatus as defined by claim 1, wherein

said manifold device includes a first connection region configured to enable connection of the aspiration actuator directly to the manifold device at the first aspiration port.

65. (New) The hybrid valve apparatus as defined by claim 64, wherein

said manifold device includes a second connection region configured to enable connection of the dispensing actuator directly to the manifold device at the first dispensing port.

66. (New) A hybrid valve apparatus for use with an aspiration actuator and a dispensing actuator to transfer fluid from a reservoir to a test site on a substrate surface comprising:

a valve assembly movable between an aspiration condition and a dispensing condition; and

a manifold providing a fluid aspiration conduit having a first aspiration port in fluid communication with the aspiration actuator, and a second aspiration port in selective fluid communication with the valve assembly to selectively aspirate a liquid sample slug from the reservoir into a discrete sample path, a primary passage portion thereof that extends through at least a portion of said manifold for fluid communication with said valve assembly, when the valve assembly is in the aspiration condition, said primary passage portion having a transverse cross-sectional area from about 0.2 mm^2 to about 0.8 mm^2, said manifold further providing a fluid dispensing conduit having a first dispensing port in fluid communication with the dispensing actuator, and a second dispensing port in selective fluid communication with the valve assembly to selectively dispense at least one droplet of the liquid sample slug from the sample path when the valve assembly is in the dispensing condition,

wherein, in the aspiration condition, said sample path is out of fluid communication with the dispensing actuator and, in the dispensing condition, said sample path is out of fluid communication with the aspiration actuator.

67. (New) The hybrid valve apparatus as defined by claim 66, further including:

a nozzle member having one end fluidly coupled to said primary passage portion and an opposite end terminating at a dispensing orifice configured to dispense said droplet.

68. (New) The hybrid valve apparatus as defined by claim 67, wherein

the one end of said nozzle member being mounted to said manifold and fluidly coupled to said primary passage portion .

69. (New) The hybrid valve apparatus as defined by claim 66, wherein

said manifold includes a first connection region configured to enable connection of the aspiration actuator directly to the manifold at the first aspiration port.

70. (New) The hybrid valve apparatus as defined by claim 66, wherein

said manifold includes a second connection region configured to enable connection of the dispensing actuator directly to the manifold at the first dispensing port.

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71. (New) The hybrid valve apparatus as defined by claim 66, wherein

said manifold includes a stator face containing the second aspiration port and the second dispensing port, and said valve assembly includes a valve body having a contact face slideably contacting the stator face at a stator-contact interface for sliding sealed contact between

the aspiration condition, fluidly coupling the second aspiration port to the primary passage portion of the sample path, and

the dispensing condition, fluidly coupling the second dispensing port to the primary passage portion of the sample path.

72. (New) The hybrid valve apparatus as defined by claim 71, wherein

said contact face of the valve body includes

an aspiration channel, fluidly coupling the second aspiration port to the primary passage portion of the sample path through the aspiration channel, in the aspiration condition, and

a dispensing channel, fluidly coupling the second dispensing port to the primary passage portion of the sample path through the dispensing channel, in the dispensing condition.

73. (New) The hybrid valve apparatus as defined by claim 72, wherein

said manifold includes a primary passage defining at least a portion of the sample path, and having an upper communication port terminating at the stator face for fluid communication with the aspiration channel in the aspiration condition, and for fluid communication with the dispensing channel in the dispensing condition.

74. (New) The hybrid valve apparatus as defined by claim 73, further including:

a nozzle member having one end fluidly coupled to said primary passage and an opposite end terminating at a dispensing orifice configured to dispense said droplet.

75. (New) The hybrid valve apparatus as defined by claim 72, wherein

at least one of said valve body and said manifold is rotatable about a rotation axis extending substantially perpendicular to the stator-contact interface to rotate said contact face, said aspiration channel and said dispensing channel relative to the stator face between the aspiration condition and the dispensing condition.

76. (New) The fluid transfer apparatus as defined by claim 75, wherein

said dispensing channel and said aspiration channel extend in a direction substantially radially about said rotational axis.

77. (New) The fluid transfer apparatus as defined by claim 66, further including:

a digitally regulated hydraulic pressure system in fluid communication with the dispensing actuator for precision operation thereof.

78. (New) A hybrid valve apparatus for use with an aspiration actuator and a dispensing actuator to transfer fluid from a reservoir to a test site on a substrate surface comprising:

a digitally regulated hydraulic ~~pressure system~~ in fluid communication with the dispensing actuator for precision operation thereof;

a valve assembly movable between an aspiration condition and a dispensing condition; and

a manifold providing a fluid aspiration conduit having a first aspiration port in fluid communication with the aspiration actuator, and a second aspiration port in selective fluid communication with the valve assembly to selectively aspirate a liquid sample slug from the reservoir into a discrete sample path, a primary passage portion thereof that extends through at least a portion of said manifold for fluid communication with said valve assembly, when the valve assembly is in the aspiration condition, said manifold device further providing a fluid dispensing conduit having a first dispensing port in fluid communication with the dispensing actuator, and a second dispensing port in selective fluid communication with the valve assembly to selectively dispense at least one droplet of the liquid sample slug from the sample path when the valve assembly is in the dispensing condition,

wherein, in the aspiration condition, said sample path is out of fluid communication with the dispensing actuator and, in the dispensing condition, said sample path is out of fluid communication with the aspiration actuator.

79. (New) The hybrid valve apparatus as defined by claim 78, further including:

a nozzle member having one end fluidly coupled to said primary passage portion and an opposite end terminating at a dispensing orifice configured to dispense said droplet.

80. (New) The hybrid valve apparatus as defined by claim 79, wherein

the one end of said nozzle member being mounted to said manifold and fluidly coupled to said primary passage portion .

81. (New) The hybrid valve apparatus as defined by claim 78, wherein

said manifold includes a first connection region configured to enable connection of the aspiration actuator directly to the manifold at the first aspiration port.

82. (New) The hybrid valve apparatus as defined by claim 78, wherein

said manifold includes a second connection region configured to enable connection of the dispensing actuator directly to the manifold at the first dispensing port.

83. (New) The hybrid valve apparatus as defined by claim 78, wherein

said manifold includes a stator face containing the second aspiration port and the second dispensing port, and said valve assembly includes a valve body having a contact face slideably contacting the stator face at a stator-contact interface for sliding sealed contact between

the aspiration condition, fluidly coupling the second aspiration port to the primary passage portion of the sample path, and

the dispensing condition, fluidly coupling the second dispensing port to the primary passage portion of the sample path.

84. (New) The hybrid valve apparatus as defined by claim 83, wherein

said contact face of the valve body includes

an aspiration channel, fluidly coupling the second aspiration port to the primary passage portion of the sample path through the aspiration channel, in the aspiration condition, and

a dispensing channel, fluidly coupling the second dispensing port to the primary passage portion of the sample path through the dispensing channel, in the dispensing condition.

85. (New) The hybrid valve apparatus as defined by claim 84, wherein

said manifold includes a primary passage defining at least a portion of the sample path, and having an upper communication port terminating at the stator face for fluid communication with the aspiration channel in the aspiration condition, and for fluid communication with the dispensing channel in the dispensing condition.

86. (New) The hybrid valve apparatus as defined by claim 85, further including:

a nozzle member having one end fluidly coupled to said primary passage and an opposite end terminating at a dispensing orifice configured to dispense said droplet.

87. (New) The hybrid valve apparatus as defined by claim 84, wherein

at least one of said valve body and said manifold is rotatable about a rotation axis extending substantially perpendicular to the stator-contact interface to rotate said contact face, said aspiration channel and said dispensing channel relative to the stator face between the aspiration condition and the dispensing condition.

88. (New) The fluid transfer apparatus as defined by claim 87, wherein said dispensing channel and said aspiration channel extend in a direction substantially radially about said rotational axis.